

WE CLAIM:

1. In a kitchen oven having an infrared gas broiler with a venturi tube assembly extending forwardly from a back wall of the oven for supplying fuel gas and drawing ambient air for combustion through a venturi tube opening at the oven back wall, an improvement

5 comprising;

ducting mounted on the oven back wall and extending over the venturi tube opening, and a fan mounted on the oven in communication with said ducting for supplying a positive air flow through the ducting to the venturi tube opening.

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P1 2. The kitchen oven improvement of claim 1, wherein said ducting includes an opening adjacent the venturi tube opening for the discharge of excess air of said supply of positive air flow.

3. The kitchen oven improvement of claim 2, wherein said opening allows the intake of ambient air to said venturi tube opening when said supply of positive air flow is inadequate for operating said venturi tube assembly.

4. The kitchen oven improvement of claim 1, wherein said ducting includes an opening adjacent the venturi tube opening for the discharge of excess air of said supply of positive air flow and allows the intake of ambient air to said venturi tube opening when said supply of positive air flow is inadequate for operating said venturi tube assembly.

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P1 5. The kitchen oven improvement of claim 1, wherein an inlet to said ducting is located adjacent the top exterior of the oven for drawing air across the top of the oven.

6. The kitchen oven improvement of claim 1, wherein said ducting includes a downwardly extending duct on the oven back wall and a laterally extending transfer duct having

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a first end communicating with said downwardly extending duct, said transfer duct having a second end communicating with the venturi tube opening.

7. The kitchen oven improvement of claim 6, wherein said ducting includes a duct enclosure at least partially surrounding the venturi tube opening and communicating with said second end of said transfer duct for receiving the positive air flow.

8. The kitchen oven improvement of claim 7, wherein said duct enclosure has closed sides and top with an open bottom.

9. The kitchen oven improvement of claim 8, wherein said transfer duct has an upwardly facing L-shaped portion on said second end extending into said duct enclosure.

10. The kitchen oven improvement of claim 6, 7, 8 or 9 wherein said transfer duct has an upwardly facing L-shaped portion on said first end extending into said downwardly extending duct.

11. The kitchen oven improvement of claim 6, wherein said first end of said transfer duct is mounted on a rear surface of said downwardly extending duct and an opening is provided between said transfer duct and said downwardly extending duct.

12. The kitchen oven improvement of claim 6 or 11, wherein said second end of said transfer duct is spaced rearwardly from the oven back wall and includes an opening opposite the venturi tube opening for discharging the positive air flow toward the venturi tube opening.

13. In a kitchen oven having a high temperature self-cleaning apparatus including a fan for drawing air over the top of the oven for cooling during self-cleaning and the oven also having an infrared gas broiler with a venturi tube assembly extending forwardly from a back wall of the oven for supplying fuel gas and drawing ambient air for combustion through a venturi tube opening at the oven back wall, an improvement comprising;

Sub A1 a first duct mounted on the oven back wall in communication with the fan and extending downwardly from the top of the oven, and

a second duct mounted on the oven back wall in communication with said first duct and the venturi tube opening for supplying a positive flow of air to the venturi tube assembly from the fan and said first duct.

14. The kitchen oven improvement of claim 13, wherein said second duct includes opening adjacent the venturi tube opening for the discharge of excess air of said supply of positive air flow.

15. The kitchen oven improvement of claim 14, wherein said opening allows the intake of ambient air to said venturi tube opening when said supply of positive air flow is inadequate for operating said venturi tube assembly.

16. The kitchen oven improvement of claim 13, wherein said second duct includes an opening adjacent the venturi tube opening for the discharge of excess air of said supply of positive air flow and allows the intake of ambient air to said venturi tube opening when said supply of positive air flow is inadequate for operating said venturi tube assembly.

Sub A1 17. The kitchen oven improvement of claim 13, wherein said second duct includes a duct enclosure at least partially surrounding the venturi tube opening.

18. The kitchen oven improvement of claim 13, wherein said second duct has a first end mounted on a rear surface of said first duct and an opening is provided between said first duct and said first end of said second duct.

19. The kitchen oven improvement of claim 18, wherein a second end of said second duct is rearwardly spaced from the oven back wall and has an opening opposite the venturi tube opening.

Sub 21 20. A kitchen oven comprising, an oven cell having a top wall, a bottom wall, side walls, a back wall and a front door, said oven cell having a heating means near the bottom wall for baking and an infrared gas broiler near the top wall for broiling, said infrared gas broiler having a venturi tube assembly extending forwardly from said back wall of the oven for supplying fuel gas and drawing ambient air for combustion through a venturi tube opening at said oven back wall and a fan mounted on the oven in communication with said venturi tube opening for supplying a positive flow of air to said venturi tube opening and allowing a free flow of ambient air into and out of said venturi tube opening separate from said positive air flow.

21. The kitchen oven of claim 20, further including ducting mounted on said oven back wall and extending over said venturi tube opening, said ducting communicating with said fan for supplying said positive air flow from said fan to said venturi tube opening.

22. The kitchen oven of claim 21, wherein said ducting includes a free flow opening adjacent said venturi tube opening for allowing said free flow of ambient air.

Sub 21 23. The kitchen oven of claim 21 or 22, wherein an inlet to said ducting is located adjacent said top wall for drawing ambient air over said top wall of the oven.

24. The kitchen oven of claim 23, wherein said ducting includes a downwardly extending duct on the oven back wall and a laterally extending transfer duct having a first end communicating with said downwardly extending duct, said transfer duct having a second end communicating with the venturi tube opening.

20 25. The kitchen oven of claim 24, wherein said ducting includes a duct enclosure at least partially surrounding the venturi tube opening and communicating with said second end of said transfer duct for receiving the positive air flow.

26. The kitchen oven of claim 25, wherein said duct enclosure has closed sides and top with an open bottom.

27. The kitchen oven of claim 24, wherein said first end of said transfer duct is mounted on a rear surface of said downwardly extending duct and an opening is provided between said transfer duct and said downwardly extending duct.

28. The kitchen oven of claim 24, wherein said second end of said transfer duct is spaced rearwardly from the oven back wall and includes an opening opposite the venturi tube opening for discharging the positive air flow toward the venturi tube opening, said free-flow opening being formed by the space between said oven back wall and said transfer duct.

29. The kitchen oven of claim 27, wherein said second end of said transfer duct is spaced rearwardly from the oven back wall and includes an opening opposite the venturi tube opening for discharging the positive air flow toward the venturi tube opening, said free-flow opening being formed by the space between said oven back wall and said transfer duct.